

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106



August 31, 2012

Jason Burkey
Oldcastle SW Group, Inc.
P.O. Box 3609
Grand Junction, CO 81502

John W. Hickenlooper
Governor

Mike King
Executive Director

Loretta Piñeda
Director

RE: *Vader Pit, Permit No. M-1978-287, Reclamation Costs Update and Notice of Surety Increase SI-2*

Dear Mr. Burkey:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed). ***Therefore, pursuant to Section 34-32.5-117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter.*** The additional amount needs to be accepted prior to **Wednesday, October 31, 2012**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Staff calculations estimate the cost to reclaim the above referenced site to be \$58,500.00. This is an increase of \$35,572.00 over the \$22,928.00 currently held by the Division. This estimate is based on conditions observed during the August 15, 2012 inspection.

Please make arrangements with Barbara Coria at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Barbara Coria.

If you require additional information, have questions or concerns, please contact me at the DRMS Grand Junction Field Office.

Sincerely,



Dustin Czaplak

Environmental Protection Specialist
Division of Reclamation, Mining and Safety
101 South 3rd, Suite 301
Grand Junction, CO 81501
Phone: (970) 243-6299

Enc: Financial Warranty Cost Estimate

COST SUMMARY WORK

Task description: Review costs following inspection (estimate based on current disturbance)

Site: Vader Pit

Permit Action: 2012AugInsp

Permit/Job#: M1978287

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 8/31/2012

County: Gunnison

Filename: M287-000

User: DMC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Haul topsoil to area north of creek, on east side of pond	TRUCK1	1	10.58	\$3,306.07
02a	Spread topsoil in above area	DOZER	1	3.78	\$755.33
03a	Revegetate area north of creek	REVEGE	1	5.00	\$2,278.91
04a	Rip area south of creek	RIPPER	1	20.51	\$4,373.00
04b	Finish grade area south of creek	DOZER	1	19.62	\$3,922.44
05a	Distribute topsoil from stockpile throughout area south of creek	TRUCK1	1	33.28	\$10,397.59
06a	Spread topsoil in area south of creek	DOZER	1	21.92	\$4,380.93
07a	Revegetate area south of creek	REVEGE	1	16.00	\$13,217.66
08a	Mobilize reclamation crew and equipment	MOBILIZE	1	2.57	\$2,742.11
<u>SUBTOTALS:</u>				133.26	\$45,374.04

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 66.63
Profit: 10.00

Total = \$916.56

Total = \$476.43

Total = \$3,951.16

Total = \$4,537.40

TOTAL O & P = \$9,881.55

CONTRACT AMOUNT (direct + O & P) = \$55,255.59

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00
Engineering work and/or contract/bid preparation: 0.00
Reclamation management and/or administration: 5.00

Total = 500.00

Total = \$0.00

\$2,762.78

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$13,144.33

TOTAL BOND AMOUNT (direct + indirect) = \$58,500.00

TRUCK/LOADER TEAM WORKTask description: Haul topsoil to area north of creek on east side of pondSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287PROJECT IDENTIFICATIONTask #: 01AState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-01aUser: DMCAgency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

		Equipment Description
Truck Loader Team -Truck:		Generic 12-18 cy, 6x4
-Loader:		CAT 972H
Support Equipment -Load Area:		NA
-Dump Area:		NA
Road Maintenance -Motor Grader:		NA
-Water Truck:		NA

Cost Breakdown:	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	NA	NA	NA
Ownership cost/hour:	\$14.78	\$36.70	NA	NA	NA	NA
Operating cost/hour:	\$65.18	\$32.77	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$22.29	\$38.49	NA	NA	NA	NA
Unit Subtotals:	\$102.25	\$107.96	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work: \$312.46		Support:	\$0.00	Maint:	\$0.00

Total work team cost/hour: \$312.46MATERIAL QUANTITIESInitial volume: 3,025

CCY

Swell factor: 1.000Loose volume: 3,025

LCY

Source of estimated volume: Approx. 2.5 ac. @ 9" depthSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 50,300

Pounds

Payload Capacity: 31.44

LCY

Truck Bed (volume) Basis:

Struck Volume:	12.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	15.00	LCY
Adjusted Volume:	18.00	LCY

Final Truck Volume Based on Number of Loader Passes: 16.38 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - mixed moist aggregates (95-100%) 0.975
Adjusted Capacity:	5.460	LCY

Job Condition Corrections:

Site Altitude (ft.): 7750 feet

	Truck	Loader	Source
Altitude Adj:	0.970	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.805	0.830	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.465	minutes
Net Load Time per Truck:		1.030	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.515	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.928	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2200.00	0.00	4.00	4.00	2665	0.988

Haul Time: 0.988 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2200.00	0.00	4.00	4.00	2849	0.808

Return Time: 0.808 minutesTotal Truck Cycle Time: 4.269 minutes

Loading Tool unit
 Production 635.93 LCY/Hour Adjusted for job efficiency: 527.82 LCY/Hour
 Truck Unit Production 230.20 LCY/Hour Adjusted for job efficiency: 191.07 LCY/Hour
 Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 382.13 LCY/Hour
 Adjusted single truck/loader team production: 382.13 LCY/Hour
 Adjusted multiple truck/loader team production: 382.13 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: 7.92 Hours
 Unit cost: \$0.818 /LCY Total job cost: \$2,473.45

BULLDOZER WORKTask description: Spread topsoilSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287**PROJECT IDENTIFICATION**Task #: 02AState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-02aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8UHorsepower: 310Blade Type: UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$58.56	NA
Operating Cost/Hour:	\$102.84	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.49	NA

Total unit Cost/Hour: \$199.89Total Fleet Cost/Hour: \$199.89**MATERIAL QUANTITIES**Initial Volume: 3,025Swell factor: 1.000Loose volume: 3,025 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 931.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 7,750 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 800.52 LCY/hr

Adjusted fleet production: **800.52 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)
 Unit cost: \$0.250/LCY

Total job time: **3.78 Hours**
 Total job cost: **\$755.33**

REVEGETATION WORKTask description: Revegetate area north of creekSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287PROJECT IDENTIFICATIONTask #: 03AState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-03aUser: DMCAgency or organization name: DRMSFERTILIZINGMaterials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Fertilizer Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$86.71
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
Total Tilling Cost/Acre	\$231.91

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Orchardgrass - Latar	1.00	12.40	\$2.16
Smooth Brome - Manchar	5.50	18.31	\$10.62
Timothy - Climax	0.50	14.35	\$0.57
Totals Seed Mix	7.00	45.05	\$13.34

Application

Description	Cost /Acre
Drill seeding {DMG}	\$90.11
Total Seed Application Cost/Acre	\$90.11

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$164.00	\$328.00
Total Mulch Materials Cost/Acre				\$328.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Total Mulch Application Cost/Acre	\$65.89

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	2.5	Cost /Acre:	\$729.25
Estimated Failure Rate:	25%	Cost /Acre*:	\$729.25
*Selected Replanting Work Items:	TILLING, SEEDING, MULCHING		
Initial Job Cost:	\$1,823.13		
Reseeding Job Cost:	\$455.78		
Total Job Cost:	\$2,278.91		
Job Hours:	5.00		

BULLDOZER RIPPING WORK

Task description: Rip area south of creek

Site: Vader Pit

Permit Action: 2012AugInsp

Permit/Job#: M1978287

PROJECT IDENTIFICATION

Task #: 04A

State: Colorado

Abbreviation: None

Date: 8/31/2012

County: Gunnison

Filename: M287-04a

User: DMC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8U
Ripper Attachment: 3-Shank Ripper

Horsepower: 310
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$65.28	NA
Operating Cost/Hour:	\$102.84	100
Ripper Operating Cost/Hour:	\$6.49	100
Operator Cost/Hour:	\$38.49	NA
Total Unit Cost/Hour:	\$213.10	
Total Fleet Cost/Hour:	\$213.10	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 14.00 acres Rip Depth (ft): 2.00 Volume: 45,173 BCY or CCY

Source of estimated quantity: Site inspection

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 mph
Average Ripping Width: 7.08 degrees
Average Ripping Length: 500.00 feet
Average Dozer Speed: 88.00 feet
Average Maneuver Time: 0.25 feet
Production per unit area: 0.822 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.822 Acres/hr
Site Altitude: 7,750 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.68 Acres/hr
Adjusted Hourly Fleet Production: 0.68 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 20.52 Hours

Unit cost: \$312.339 Per acre Total job cost: \$4,373.00

BULLDOZER WORKTask description: Finish grade area south of creekSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287**PROJECT IDENTIFICATION**Task #: 04BState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-04bUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8UHorsepower: 310Blade Type: UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$58.56	NA
Operating Cost/Hour:	\$102.84	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.49	NA

Total unit Cost/Hour: \$199.89Total Fleet Cost/Hour: \$199.89**MATERIAL QUANTITIES**Initial Volume: 3,500Swell factor: 1.000Loose volume: 3,500 LCYSource of estimated volume: Estimate from inspectionSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 200 feetUnadjusted hourly production: 515.8 LCY/hrMaterials consistency description: Dry, non-cohesive 0.8Average push gradient: 0 %Average site altitude: 7,750 feetMaterial weight: 2,650 lbs/LCYWeight description: Decomposed rock - 25% Rock, 75% Earth**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	0.800	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3458

Adjusted unit production: 178.36 LCY/hr

Adjusted fleet production: **178.36 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)
 Unit cost: \$1.121/LCY

Total job time: **19.62 Hours**
 Total job cost: **\$3,922.44**

TRUCK/LOADER TEAM WORKTask description: Distribute topsoil throughout area south of creekSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287PROJECT IDENTIFICATIONTask #: 05AState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-05aUser: DMCAgency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Generic 12-18 cy, 6x4
-Loader:	CAT 972H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance -Motor Grader:	NA
-Water Truck:	NA

<u>Cost Breakdown:</u>	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	NA	NA	NA
Ownership cost/hour:	\$14.78	\$36.70	NA	NA	NA	NA
Operating cost/hour:	\$65.18	\$32.77	NA	NA	NA	NA
Ripper op. cost/hour:	NA	\$0.00	NA	NA	NA	NA
Operator cost/hour:	\$22.29	\$38.49	NA	NA	NA	NA
Unit Subtotals:	\$102.25	\$107.96	NA	NA	NA	NA
Number of Units:	2	1	0	0	0	0
Group Subtotals:	Work: \$312.46		Support: \$0.00		Maint: \$0.00	

Total work team cost/hour: \$312.46MATERIAL QUANTITIESInitial volume: 17,545

CCY

Swell factor: 1.000Loose volume: 17,545

LCY

Source of estimated volume: Approx. 14.5.5 ac. @ 9" depthSource of estimated swell factor: Cat HandbookMaterial Purchase Cost: \$0.00Total Cost: \$0.00HOURLY PRODUCTIONTruck Capacity:Truck Payload (weight) Basis:Material weight: 1,600

Pounds/LCY

Description: Top SoilRated Payload: 50,300

Pounds

Payload Capacity: 31.44

LCY

Truck Bed (volume) Basis:

Struck Volume:	12.00	LCY
Heaped Volume:	18.00	LCY
Average Volume:	15.00	LCY
Adjusted Volume:	18.00	LCY

Final Truck Volume Based on Number of Loader Passes: 16.38 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	0.975	Loose material - mixed moist aggregates (95-100%) 0.975
Adjusted Capacity:	5.460	LCY

Job Condition Corrections:

Site Altitude (ft.): 7750 feet

	Truck	Loader	Source
Altitude Adj:	0.970	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)

Net Correction: **0.805** **0.830**

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.060	minutes
Adjusted Loader Cycle Time:		0.465	minutes
Net Load Time per Truck:		1.030	minutes

Truck Cycle Time:

Truck Exchange Time:	0.50	Minutes	Adjusted for site altitude:	0.515	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	Minutes
Truck Maneuver and Dump Time:	0.90	Minutes	Adjusted for site altitude:	0.928	Minutes

Truck Travel (Haul & Return) Time:
penetration 4.0

Road Condition: Rutted dirt, little maintenance, no water, 1" tire

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	2665	0.538

Haul Time: 0.538 minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	0.00	4.00	4.00	2849	0.387

Return Time: 0.387 minutesTotal Truck Cycle Time: 3.398 minutes

Loading Tool unit
 Production 635.93 LCY/Hour Adjusted for job efficiency: 527.82 LCY/Hour
 Truck Unit Production 289.20 LCY/Hour Adjusted for job efficiency: 240.04 LCY/Hour
 Optimal No. of Trucks: 2 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 480.08 LCY/Hour
 Adjusted single truck/loader team production: 480.08 LCY/Hour
 Adjusted multiple truck/loader team production: 480.08 LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: 36.55 HoursUnit cost: \$0.651 /LCY Total job cost: \$11,419.21

BULLDOZER WORKTask description: Spread topsoilSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287**PROJECT IDENTIFICATION**Task #: 06AState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-06aUser: DMCAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8UHorsepower: 310Blade Type: UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$58.56	NA
Operating Cost/Hour:	\$102.84	100
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.49	NA

Total unit Cost/Hour: \$199.89Total Fleet Cost/Hour: \$199.89**MATERIAL QUANTITIES**Initial Volume: 17,545Swell factor: 1.000Loose volume: 17,545 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly production: 931.6 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 7,750 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 800.52 LCY/hr

Adjusted fleet production: **800.52 LCY/hr**

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.250/LCY

Total job time: **21.92 Hours**

Total job cost: **\$4,380.93**

REVEGETATION WORKTask description: Revegetate area south of creekSite: Vader PitPermit Action: 2012AugInspPermit/Job#: M1978287**PROJECT IDENTIFICATION**Task #: 07AState: ColoradoAbbreviation: NoneDate: 8/31/2012County: GunnisonFilename: M287-07aUser: DMCAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Fertilizer Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
Chisel plowing {DMG}	\$86.71
Weed control spraying (MEANS 31 31 16.13 3100)	\$145.20
Total Tilling Cost/Acre	\$231.91

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Orchardgrass - Latar	1.00	12.40	\$2.16
Smooth Brome - Manchar	5.50	18.31	\$10.62
Timothy - Climax	0.50	14.35	\$0.57
Totals Seed Mix	7.00	45.05	\$13.34

Application

Description	Cost /Acre
Drill seeding {DMG}	\$90.11
Total Seed Application Cost/Acre	\$90.11

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$164.00	\$328.00
Total Mulch Materials Cost/Acre				\$328.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$65.89
Total Mulch Application Cost/Acre	\$65.89

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres:	14.5	Cost /Acre:	\$729.25
Estimated Failure Rate:	25%	Cost /Acre*:	\$729.25
*Selected Replanting Work Items:	TILLING, SEEDING, MULCHING		
Initial Job Cost:	\$10,574.13		
Reseeding Job Cost:	\$2,643.53		
Total Job Cost:	\$13,217.66		
Job Hours:	16.00		

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize reclamation crew and equipment**Site: **Vader Pit**Permit Action: **2012AugInsp**Permit/Job#: **M1978287****PROJECT IDENTIFICATION**Task #: **08A**State: **Colorado**Abbreviation: **None**Date: **8/31/2012**County: **Gunnison**Filename: **M287-08a**User: **DMC**Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**Shift basis: **1 per day**Cost Data Source: **CRG Data**Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER
(25T, 50T, AND 100T)****Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8U	53.70	\$65.28	\$125.45	1	\$190.73	\$125.45	\$250.00
CAT 972H	28.00	\$36.70	\$117.55	1	\$154.25	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$39.59	\$88.67	1	\$128.26	\$88.67	\$250.00

Subtotals: **\$473.24** **\$331.67** **\$750.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Generic 12-18 cy, 6x4	\$102.25	2	\$204.50	\$204.50
Light Duty Pickup, 4x4, 1 T. Crew	\$25.30	1	\$25.30	\$25.30

Subtotals: **\$229.80** **\$229.80**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GUNNISON</u>	
Total one-way travel distance:	<u>5.00</u>	miles
Average Travel Speed:	<u>35.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$2,676.45</u>
'* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$65.66</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time:	<u>2.57</u>	Hours
-----------------	-------------	-------

Total job cost:	<u>\$2,742.11</u>
-----------------	-------------------